

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended) Vertebral osteosynthesis equipment, including bony anchoring members, ~~such as pedicular screws (1) and/or hooks,~~ one or two linking rods (2), intended to be connected to these anchoring members, and parts (3) for connecting this(these) rod(s) (2) to these anchoring members; at least one of the anchoring members is of the "polyaxial" ~~type, i.e. it comprises~~ type comprising a proximal stud (5) articulated with respect to a base portion (6) enabling bony anchoring; clamping means (4) enable assembly of the connecting part (3) on the anchoring member;

~~equipment characterized in that~~ wherein the proximal stud (5) comprises a surface (12, 32) forming an axial stop, against which the connecting part (3) to be installed on the polyaxial anchoring member is intended for resting, and ~~in that~~ said clamping means (4) enable to clamp this connecting part (3) against this surface (12, 32), said surface (12, 32) being positioned so that the connecting part (3), when it is clamped against this surface (12, 32), is not clamped against the base portion (6) so that there remains, after clamping, a possibility

of articulated backlash of the proximal stud (5) with respect to said base portion (6),

wherein at least one polyaxial anchoring member comprises at least one part or portion of a part (31) with elastically deformable structure, and

wherein the proximal stud (5) and said surface (12, 32) forming an axial stop are formed in order to enable the adjustment of the axial position of this surface (12, 32) with respect to the proximal stud (5), and this surface (12, 32) is formed to clamp said part or portion of a part (31) with the elastically deformable structure between said surface (12, 32) and a bearing surface (17, 18) against which this part or portion of a part rests.

2. (currently amended) Vertebral osteosynthesis equipment according to claim 1, ~~characterized in that at least one polyaxial anchoring member comprises~~ wherein, the at least one part or portion of a part (31) with elastically deformable structure ~~[[,]]~~ is interposed, after assembly, between said connecting part (3) and ~~[[a]]~~ said bearing surface (17, 18).

3. (original) Vertebral osteosynthesis equipment according to claim 2, characterized in that said part or portion of a part (31) with elastically deformable structure is formed in order to dampen the movement of the proximal stud (5) over the

whole backlash of this stud, and is notably composed of a compressible material.

4. (original) Vertebral osteosynthesis equipment according to claim 2, characterized in that said part or portion of a part (31) with elastically deformable structure is formed in order to provide this dampening effect only in the extreme positions of the backlash of the proximal stud (5).

5. (cancelled)

6. (currently amended) Vertebral osteosynthesis equipment according to claim [[5]] 1, wherein ~~characterized in that~~ the proximal stud (5) is threaded and said surface (32) forming an axial stop is in the form of a part with a tapered hole which may be screwed on this stud (5).

7. (currently amended) Vertebral osteosynthesis equipment according to claim 2, ~~characterized in that~~ wherein said bearing surface (17, 18) against which the part or portion of a part (31) with elastically deformable structure rests, ~~may be~~ is a surface (17, 18) provided on said base portion (6) or the vertebral bone itself.

8. (currently amended) Vertebral osteosynthesis equipment according to claim 1, ~~characterized in that~~ wherein the walls (11, 17) of the proximal stud (5) and of the base portion (6) which slip against one another during the backlash of this stud (5) include a smooth and resistant coating layer, capable of resisting a very large number of slipping movements of these walls against one another, ~~such as a ceramic or titanium nitride coating layer.~~

9. (currently amended) Vertebral osteosynthesis equipment according to claim 1, ~~characterized in that~~ wherein the articulation of the proximal stud (5) consists of faces (11, 17) in the form of a sphere or of portions of a sphere slipping against one another, and ~~in that~~ these faces (11, 17) exhibit a diameter which is ~~significantly greater than that of the proximal stud (5), notably~~ at least double the diameter of ~~this~~ the proximal stud (5).

10. (previously presented) Vertebral osteosynthesis equipment according to claim 1, characterized in that at least one linking rod (2) of the equipment comprises:

- a portion (2a) of rod including a part (41) with elastically deformable structure and an articulated stud (5),

- another portion (2b) of rod including a bearing zone (42) against this part (41) with elastically deformable structure, and

- clamping means (43) to clamp this bearing zone (42) against this part (41) with elastically deformable structure.

11. (previously presented) Vertebral osteosynthesis equipment according to claim 1, characterized in that the connecting part (3) comprises preferably a rounded section (20) intended for surrounding a linking rod (2) and two parallel drilled wings (21), intended for engaging onto said proximal stud (5) and for being clamped towards one another in order to provide the clamping of said rounded section (20) around a linking rod (2).

12. (new) Vertebral osteosynthesis equipment, comprising:

- polyaxial anchoring members comprising a proximal stud (5) articulated with respect to a base portion (6) enabling bony anchoring;

- linking rods (2) intended to be connected to the anchoring members;

- a connecting part (3) for each connecting linking rod (2) to a corresponding one of the anchoring members; and

clamping parts (4) enabling assembly of each connecting part (3) on the corresponding one anchoring member,

wherein the proximal stud (5) comprises a surface (12, 32) forming an axial stop, against which stop the connecting part (3) to be installed on the corresponding one anchoring member is intended for resting, said clamping part (4) enabled to clamp this connecting part (3) against this surface (12, 32), said surface (12, 32) being positioned so that the connecting part (3), when clamped against this surface (12, 32), is not clamped against the base portion (6) so that there remains, after clamping, a possibility of articulated backlash of the proximal stud (5) with respect to said base portion (6),

wherein at least one of the anchoring members comprises at least one part or portion of a part (31) with elastically deformable structure,

wherein, the at least one part or portion of a part (31) with elastically deformable structure is interposed, after assembly, between said connecting part (3) and said bearing surface (17, 18), and

wherein the proximal stud (5) and said surface (12, 32) forming an axial stop are formed in order to enable the adjustment of the axial position of this surface (12, 32) with respect to the proximal stud (5), and this surface (12, 32) is formed to clamp said part or portion of a part (31) with the elastically deformable structure between said surface (12, 32)

and a bearing surface (17, 18) against which this part or portion of a part rests.

13. (new) Vertebral osteosynthesis equipment according to claim 12, wherein said part or portion of a part (31) with elastically deformable structure dampens the movement of the proximal stud (5) over the whole backlash of this stud.

14. (new) Vertebral osteosynthesis equipment according to claim 12, wherein said part or portion of a part (31) with elastically deformable structure provides an dampening effect only in the extreme positions of the backlash of the proximal stud (5).

15. (new) Vertebral osteosynthesis equipment according to claim 12, wherein the proximal stud (5) is threaded and said surface (32) forming an axial stop comprises a tapered hole to be screwed on the stud (5).

16. (new) Vertebral osteosynthesis equipment according to claim 12, wherein said bearing surface (17, 18) against which the part or portion of a part (31) with elastically deformable structure rests, is a surface (17, 18) provided on said base portion (6).

17. (new) Vertebral osteosynthesis equipment according to claim 12, wherein walls (11, 17) of the proximal stud (5) and of the base portion (6) slip against one another during the backlash of the stud (5) and include a smooth and resistant coating layer.

18. (new) Vertebral osteosynthesis equipment according to claim 12, wherein articulation of the proximal stud (5) consists of faces (11, 17) in the form of a sphere or of portions of a sphere slipping against one another, and the faces (11, 17) exhibit a diameter at least double a diameter of the proximal stud (5).

19. (previously presented) Vertebral osteosynthesis equipment according to claim 12, wherein at least one linking rod (2) comprises:

- a portion (2a) of rod including a part (41) with elastically deformable structure and an articulated stud (5),

- another portion (2b) of rod including a bearing zone (42) against this part (41) with elastically deformable structure, and

- clamping means (43) to clamp this bearing zone (42) against this part (41) with elastically deformable structure, and

the connecting part (3) comprises a rounded section (20) intended for surrounding a linking rod (2) and two parallel



drilled wings (21), intended for engaging onto said proximal stud (5) and for being clamped towards one another in order to provide the clamping of said rounded section (20) around a linking rod (2).

20. (new) Vertebral osteosynthesis equipment according to claim 1, wherein the walls (11, 17) of the proximal stud (5) and of the base portion (6) which slip against one another during the backlash of this stud (5) include a smooth and resistant coating layer, capable of resisting slipping movements of these walls against one another, said coating layer is a ceramic or titanium nitride coating layer.

21. (new) Vertebral osteosynthesis equipment according to claim 1, wherein the walls (11, 17) of the proximal stud (5) and of the base portion (6) which slip against one another during the backlash of this stud (5) include a ceramic or titanium nitride coating layer.